

Labor Market Assessment: 0702.00 – Computer Information Systems
Data Analytics (Associate Degree and Certificate)
Los Angeles County Center of Excellence, April 2022

Summary

Program Endorsement:	Endorsed: All Criteria Met <input type="checkbox"/>	Endorsed: Some Criteria Met <input checked="" type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Living Wage: (Entry-Level, 25 th)	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Education:	Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>
Emerging Occupation(s)			
	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>

The Los Angeles County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to one occupation:

- *Computer systems analysts* (15-1211)

Currently, a standard occupational classification (SOC) does not exist for a middle-skill occupation in the field of data analytics. While *computer systems analysts* typically require a bachelor’s degree, this occupation is not considered middle-skill.¹ Nevertheless, this occupation is closely aligned with the knowledge, skills, and abilities required for an entry-level job seeker in the field of data analytics. This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupation.

Based on the available data, there appears to be a supply gap in the region for *computer systems analysts*. While this occupation has an entry-level wage exceeding the self-sufficiency standard wage in both Los Angeles and Orange counties, the occupation typically requires a bachelor’s degree. **Due to some of the criteria being met, the COE endorses this proposed program.** Detailed reasons include:

Demand:

- **Supply Gap Criteria** – Over the next five years, there is projected to be **1,330 jobs available annually** in the region due to new job growth and replacements, **which is more than the 921 awards conferred annually** by educational institutions in the region.

¹ The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor’s degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

- **Living Wage Criteria** – In Los Angeles County, *computer systems analysts* have **entry-level wages above the self-sufficiency standard wage** (\$18.10/hour).²
- **Educational Criteria** – The Bureau of Labor Statistics (BLS) lists a bachelor's degree as the typical entry-level education for *computer systems analysts*.
 - National-level educational attainment data indicates that 21% of workers in the field have completed some college or an associate degree.

Supply:

- Between 2017 and 2020, **23 community colleges** in the LA/OC region issued awards in programs that have historically trained for the occupation of interest, conferring an average of **469 awards**.
- Between 2016 and 2019, non-community college institutions in the region conferred an average of **452 awards** in relevant programs.

² Self-Sufficiency Standard Wage data was pulled from The Self-Sufficiency Standard Tool for California. For more information, visit: <http://selfsufficiencystandard.org/california>.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for *computer systems analysts*. In Los Angeles/Orange County, the number of jobs related to this occupation is projected to increase by 1% through 2025. There will be 1,330 job openings per year through 2025 due to job growth and replacements.

This report includes employment projection data by Emsi which uses EDD information. Emsi's projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy, during the projection period, will be at approximately full employment. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, it may impact the projections. At this time, it is not possible to quantify the full impact of COVID-19 on projections of industry and occupational employment. Therefore, the projections included in this report do not take the full impacts of COVID-19 into account.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties³

Geography	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	Annual Openings
Los Angeles	12,666	12,709	43	0%	899
Orange	5,798	5,931	133	2%	432
Total	18,464	18,640	176	1%	1,330

Wages

The labor market endorsement in this report considers the hourly wages for the occupation of interest in Los Angeles County, as they relate to the county's self-sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the LA/OC region. Detailed wage information, by county, is included in Appendix A.

Los Angeles County – The typical entry-level hourly wage for *computer systems analysts* is \$39.87, which is **above** the self-sufficiency standard wage for one adult (\$18.10 in Los Angeles County). Experienced workers can expect to earn approximately \$65.54/hour, which is above the self-sufficiency standard wage estimate.

Orange County – The typical entry-level hourly wage for *computer systems analysts* is \$38.72, which is **above** the self-sufficiency standard wage for one adult (\$20.63 in Orange County). Experienced workers can expect to earn approximately \$63.60/hour, which is above the self-sufficiency standard wage estimate.

³ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Job Postings

Over the past 12 months, there have been 12,890 online job postings related to *computer systems analysts*. The highest number of job postings were for data analysts, business systems analysts, systems analysts, and IT analysts. The top skills were project management, business processes, systems analysis, business systems, and SQL. The top employers, by number of job postings, in the region were The Boeing Company, Anthem Blue Cross, Deloitte, Accenture, Raytheon, and Northrop Grumman.

It is important to note that the job postings data included in this section reflects online job postings listed in the past 12 months and does not yet demonstrate the full impact of COVID-19. While employers have generally posted fewer online job postings since the beginning of the pandemic, the long-term effects are currently unknown.

Educational Attainment

The Bureau of Labor Statistics (BLS) lists a bachelor’s degree as the typical entry-level education for *computer systems analysts*. National-level educational attainment data indicates that 21% of workers in the field have completed some college or an associate degree.

Educational Supply

Community College Supply – Exhibit 2 shows the annual and three-year average number of awards conferred by community colleges in programs that have historically trained for the occupation of interest. The colleges with the most completions in the region are Cypress, West LA, and Long Beach.

Exhibit 2: Regional community college awards (certificates and degrees), 2017-2020

TOP	Program	College	2017-18 Awards	2018-19 Awards	2019-20 Awards	3-Year Average
0702.00	Computer Information Systems	Citrus	7	5	8	7
		Compton	-	1	-	0
		East LA	16	19	15	17
		El Camino	18	14	21	18
		Glendale	-	-	5	2
		LA City	4	1	1	2
		LA Mission	9	5	1	5
		LA Trade-Tech	14	8	20	14
		Mt San Antonio	-	-	79	26
		Pasadena	1	-	-	0
		Rio Hondo	19	21	10	17
		West LA	6	8	10	8
		LA Subtotal	94	82	170	115

TOP	Program	College	2017-18 Awards	2018-19 Awards	2019-20 Awards	3-Year Average
		Cypress	8	5	4	6
		Fullerton	20	15	11	15
		Irvine Valley	-	-	2	1
		Orange Coast	3	4	2	3
		Santa Ana	6	4	2	4
		Santiago Canyon	2	3	4	3
		OC Subtotal	39	31	25	32
		Supply Subtotal/Average	133	113	195	147
0707.30	Computer Systems Analysis	Cerritos	4	2	3	3
		East LA	-	-	1	0
		LA Mission	-	-	1	0
		LA Subtotal	4	2	5	4
		Cypress	5	2	-	2
		OC Subtotal	5	2	-	2
		Supply Subtotal/Average	9	4	5	6
0708.10	Computer Networking	Cerritos	8	11	9	9
		Glendale	6	3	3	4
		LA City	37	23	-	20
		LA Pierce	23	39	20	27
		Long Beach	27	55	47	43
		Mt San Antonio	2	8	11	7
		Rio Hondo	-	5	7	4
		West LA	43	77	48	56
		LA Subtotal	146	221	145	171
		Coastline	12	38	59	36
		Cypress	37	70	95	67
		Irvine Valley	12	11	21	15
		Saddleback	17	10	21	16
		Santa Ana	7	14	12	11
		OC Subtotal	85	143	208	145
		Supply Subtotal/Average	231	364	353	316
		Supply Total/Average	373	481	553	469

Non-Community College Supply – For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that may provide training programs for the occupation of interest. Exhibit 3 shows the annual and three-year average number of awards conferred in relevant programs. Due to different data collection periods, the most recent three-year period of available data is from 2016 to 2019. Between 2016 and 2019, non-community college institutions conferred an average of 452 awards.

Exhibit 3: Regional non-community college awards, 2016-2019

CIP	Program	Institution	2016-17 Awards	2017-18 Awards	2018-19 Awards	3-Year Average
11.0103	Information Technology	Abraham Lincoln University	-	1	1	1
		Brand College	28	37	50	38
		CA Intercontinental University	1	-	-	0
		CSU-Dominguez Hills	-	1	5	2
		CSU-Los Angeles	117	162	158	146
		CSU-Northridge	43	54	54	50
		Platt College-Anaheim	-	1	11	4
		Platt College-LA	-	-	6	2
		Stanbridge University	25	-	-	8
		Trident University International	74	93	75	81
		University of La Verne	-	-	3	1
		University of Phoenix-CA	16	60	57	44
11.0501	Computer Systems Analysis/Analyst	Brand College	4	2	-	2
		DeVry University-CA	94	55	49	66
		University of Phoenix-CA	4	4	-	3
15.1202	Computer Technology/Computer Systems Technology	Learnet Academy Inc.	11	1	-	4
Supply Total/Average			417	471	469	452

Appendix A: Occupational demand and wage data by county

Exhibit 4. Los Angeles County

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Computer Systems Analysts (15-1211)	12,666	12,709	43	0%	899	\$39.87	\$52.38	\$65.54
Total	12,666	12,709	43	0%	899	-	-	-

Exhibit 5. Orange County

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Computer Systems Analysts (15-1211)	5,798	5,931	133	2%	432	\$38.72	\$50.84	\$63.60
Total	5,798	5,931	133	2%	432	-	-	-

Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2020 Jobs	2025 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Typical Entry-Level Education
Computer Systems Analysts (15-1211)	18,464	18,640	176	1%	1,330	Bachelor's degree
Total	18,464	18,640	176	1%	1,330	

Appendix B: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington
- Chancellor's Office Curriculum Inventory (COCI 2.0)

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